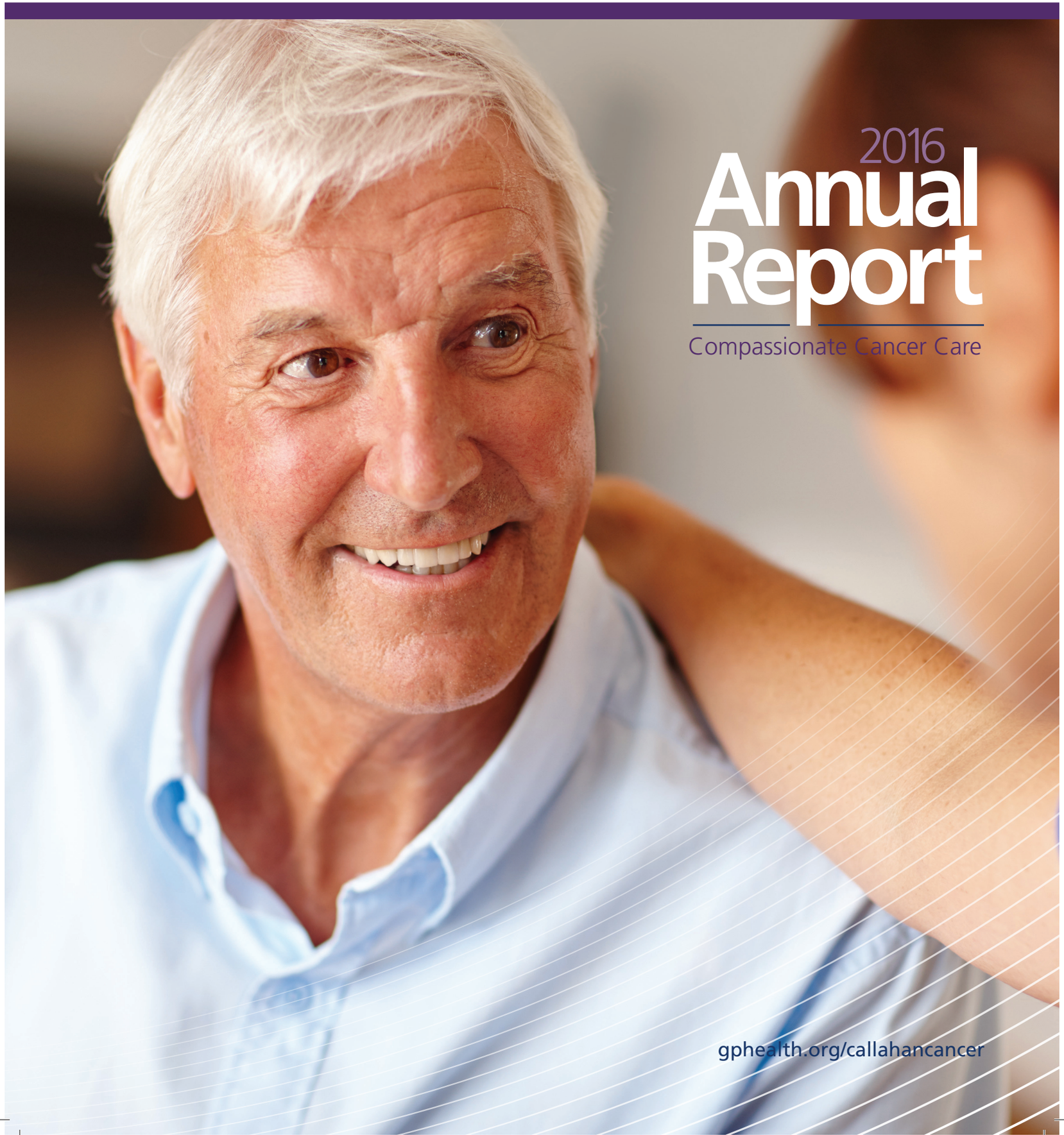
Great Plains Health
Callahan Cancer Center
Hematology & Oncology Services



2016 Annual Report

Compassionate Cancer Care

gphealth.org/callahancancer

Great Plains Health
Callahan Cancer Center

>70%

of all newly diagnosed cancer patients are treated in the more than 1,500 CoC-accredited cancer programs nationwide.

The Callahan Cancer Center is accredited as a Community Cancer Program by the American College of Surgeons Commission on Cancer (ACoS, CoC) under the Cancer Program Standards: Ensuring Patient-Centered Care. More than 70 percent of all newly diagnosed cancer patients are treated in the more than 1,500 CoC-accredited cancer programs nationwide. This accreditation must be renewed with a comprehensive survey every three years. The Great Plains Health Callahan Cancer Center is proud of the work and effort put forth by all the team members of our cancer program to maintain this accreditation, showing our dedication to quality care for every patient.

The Callahan Cancer Center is also proud to have achieved QOPI (Quality Oncology Practice Initiative) Certification. There are only 276 QOPI-certified practices in the United States. The QOPI Certification Program incorporates measures and standards based on clinical guidelines for quality oncology care. Only practices that meet or exceed a defined level of performance may achieve QOPI Certified status. To achieve certification, a practice undergoes a thorough assessment of policies and processes, as well as an on-site survey.

The Joint Commission granted Great Plains Health a three-year accreditation after a successful survey for all services covered under the Comprehensive Accreditation Manual for Hospitals. An independent, not-for-profit organization, The Joint Commission accredits and certifies more than 20,500 health care organizations and programs in the United States. The Joint Commission accreditation and certification is recognized nationwide as a symbol of quality that reflects an organization's commitment to meeting certain performance standards.

Welcome to the **Great Plains Health 2016 cancer report**

David G. Lindley, MD
Complete Family Medicine
Chairman, Cancer Committee

Welcome to the Great Plains Health 2016 Cancer Report. This year, we have chosen to focus on prostate cancer. Prostate cancer is the most common cancer in American men except for skin cancer. Each year, approximately 180,000 new cases of prostate cancer are diagnosed in the United States, and there are around 26,000 deaths from prostate cancer. This means that around one in every seven men will be diagnosed with prostate cancer during his lifetime. Prostate cancer develops mainly in older men. At least 60 percent of cases are diagnosed after the age of 65 years. Prostate cancer is rare before the age of 40. The average age, in fact, at the time of diagnosis is around 66.

The main risk factor for prostate cancer is age. It is also found more commonly in African-American men and in Caribbean men. African-American men who develop the disease are also twice as likely to die of prostate cancer as white men. Interestingly, prostate cancer seems less common in Asians and Hispanics. The reasons for these differences are unclear. Prostate cancer is also more common in North America and Northwest Europe as well as Australia and the Caribbean islands. The reasons for this are also unclear.

As with many cancers, family history is important, and certain genetic mutations also increase a person's risk of prostate cancer, such as BRCA-1 and BRCA-2 mutations and Lynch syndrome in men. Diet has been researched in terms of being a risk factor for prostate cancer. Some studies suggest that eating a lot of red meat or high-fat foods will increase the risk of prostate cancer. There is also some evidence that people who eat fewer fruits and vegetables are at a greater risk of developing prostate cancer. Some chemicals, such as Agent Orange, used during the Vietnam War, also increase people's risk of developing prostate cancer. Smoking and obesity do not seem to be risk factors. Infection in the prostate gland and sexually transmitted diseases also do not seem to cause an increased risk of prostate cancer. In addition, having a vasectomy does not increase a man's risk of prostate cancer.

Preventing cancer, when possible, is always the best approach when dealing with any form of cancer. Really, the only information in terms of prevention of prostate cancer is general advice. This would include eating an appropriate diet, which includes a reasonable amount of vegetables and fruits each day and perhaps limiting the amount of red meat in the diet. Most cancer risks are definitely lowered by being physically active and staying at a healthy weight. Even if these measures do not specifically reduce the risk of developing prostate cancer, living with any cancer is easier if the body is physically in a healthy state.

At least 60 percent of cases are diagnosed after the age of 65 years.

continued on page 6...

Cancer **committee appointments** for 2016

Physician members

David Lindley, MD
Chair, family medicine
Cancer registry quality coordinator

Oyomi Asojo, MD
Pathology

Byron Barksdale, MD
Pathology

Raymond Carlson, DO
Palliative care

Brendon Curtis, MD
General surgery

Clark Diffendaffer, MD
Diagnostic radiology

Todd Hlavaty, MD
Radiation oncology

Ladd Lake, MD
Interventional radiology

Jeremy Larsen, MD
Medical oncology

Tahir Lone, MD
Pulmonology

Avinash Pasam, MD
Medical oncology

Michael Simonson, MD
General surgery
ACoS cancer liaison physician

Irfan Vaziri, MD
Medical director
Medical oncology

Non-physician members

Jan Daniel, APRN
Palliative care

Susan Deaver
Director of home health & hospice

Kathy Feagler, RN, BSN, OCN
Director of cancer center
Cancer program administrator

Kim Gaasch
Director of pharmacy

Pam Garrick
Community outreach coordinator

Kathy Gunderson
Social worker

Megan Hanson
Marketing manager

Nan Hynes, MSW
Case management
Psychosocial services coordinator

Jill Koch
American Cancer Society

Lisa Kosmecek, RN
Nurse manager
Clinical research coordinator

Fiona Libsack
VP of marketing and education

Shelia Markley, RN, BSN, CBCN
Nurse navigator

Terry Martin, RN, OCN
Medical oncology nurse

Amanda Miller, RN, BSN, OCN
Quality improvement coordinator

Tammy Niemoth, RN, BSN, OCN
Medical oncology

Jill Reeves, MS, CTR
Cancer registrar
Cancer conference coordinator

Howard Shaw, MD
Chief medical officer

Kari Suhr, CTR
Certicode

Robin Storer
Chaplain

Celie Vaughn
Nutrition services

Merry Venezie
Administration secretary

Treg Vyzourek
Senior director of ancillary services

The role of **radiation treatment** of prostate cancer

Todd Hlavaty, MD
Radiation Oncology Director

Prostate cancer is the cancer of the new millennia for men. It has generated the most controversy of any cancer in regard to the need and criteria for screening, the role of treatment and the appropriate follow-up regarding this disease. This has been reflected in the constant change in NCCN guidelines and the need for treatment of our patients. One constant in this paradigm is the continued need for radiation oncology and the viability of prostatic brachytherapy and definitive external beam treatment using intensity-modulated radiation and image-guided treatment.

The major change in radiation treatment has recently evolved around the major concepts of normal tissue sparing and dose escalation with the advent of image-guided treatment and intensity-modulated treatment. Given the current health environment, radiation oncologists will be challenged to deliver cost-effective treatments that will provide shorter intervals of treatment with equivalent results in regard to treatment toxicity and overall results.

There will be a major impetus to provide data that will show an improvement in the quality of life as well as a distinct survival advantage to our treatment. I think we have done this many times in the past and will continue to prove this many times in the future. Our clinic is poised to meet this challenge with the advent of new technology and the constant education that goes with advanced treatment to meet the goals of an ever-changing health environment.

Welcome to the Great Plains Health 2016 cancer report

(continued from page 3)

David G. Lindley, MD
Complete Family Medicine
Chairman, Cancer Committee

Various vitamin and mineral supplements, along with medications, have been suggested to lower the risk of prostate cancer, such as selenium and vitamin E, but studies have not conclusively shown that these supplements in the diet are of any benefit.

Detecting any cancer at an early stage helps lead to better outcomes. Early detection of prostate cancer is a topic to discuss with your family practice or primary care provider. There are two tests that are available to help with early detection of prostate cancer. The first one is a blood test for the prostate-specific antigen, or PSA. The other test is a digital rectal examination, where a doctor inserts a gloved, lubricated finger into the rectum to feel the prostate gland for any irregularities.

Unfortunately, there is considerable debate between different medical sources as to the usefulness of these tests. Neither of these tests, unfortunately, is reliable for early diagnosis of prostate cancer. The other problem is that these tests can lead to overdiagnosis and overtreatment of the disease, which in itself can lead to increased morbidity. It is also a fact that while prostate cancer is very common, a majority of people live with the disease with minimal symptoms and probably are at higher risk of morbidity from the treatment than from having no treatment. Therefore, screening to detect prostate cancer early is a topic that you should discuss with your primary care provider to decide what the right approach is on an individual basis.

Prostate cancer does not usually cause any signs or symptoms until later in the disease process. Early prostate cancer generally has no symptoms. In more advanced prostate cancer, symptoms can include changes in flow or frequency of urination, blood in the urine or semen, erectile dysfunction or bone pain, particularly in the hips, back or chest. Weakness or numbness in the legs or feet is also a symptom of advanced prostate cancer. It should be noted that most of the urinary symptoms are very common simply from benign prostatic growth of the prostate, called BPH, or benign prostatic hyperplasia. This is not cancerous and happens almost universally in men as they advance in age.

If you should develop symptoms of prostate cancer and are felt to be at high risk, a prostate biopsy is a relatively easy test to undertake to make the diagnosis. There are also many treatment modalities that can be offered for prostate cancer.

I commend this annual cancer report. Great Plains Health is able to provide a full range of services for discussions about prevention of prostate cancer, along with all treatment modalities. The primary care physicians in the community should be the first people to talk to about prostate cancer screening and symptoms. Should a referral be necessary, we have all the appropriate specialists available in the North Platte community to treat this disease close to home, family and friends.

David G. Lindley, MD
Complete Family Medicine
Chairman, Cancer Committee

Prostate cancer does not usually cause any signs or symptoms until later in the disease process.

A **systemic approach** to the treatment of prostate cancer

Irfan A. Vaziri, MD
Medical Oncology Director

Early detection and treatment will lead to a significant number of men who could be cured of prostate cancer by radiation or surgery.

Prostate cancer represents about 25 percent of all newly diagnosed cancers in males and about nine percent of cancer-related deaths. There were an estimated 220,000 new cases of prostate cancer and 27,000 deaths in 2015. The disease is lethal for some men, although the majority of men with prostate cancer die of other causes. Autopsy series have shown that nearly 70 percent of men older than age 80 have occult prostate cancer. This highlights the biological and clinical course of prostate cancer, which remains highly variable. Many prostate cancers do not require immediate intervention, as the risk of death from non-cancer-related causes exceeds that from the cancer. Other prostate cancers require combined modality approaches, both to eradicate the tumor locally and to eliminate metastases.

Prostate cancer is classified into clinical states according to its location. Localized disease, clinical metastases and castration-resistant disease each have distinct therapeutic options and prognoses. PSA (prostate-specific antigen) has a role in the diagnosis and management of prostate cancer; however, limitation in the PSA sensitivity, specificity and positive-negative predictive values have led to differing opinions regarding screening recommendations. Oncologists generally tend to see these patients later in the course of their disease when the patients present with a rising PSA in the setting of prior local therapy or they have clinical metastases both in the setting of noncastrate or castrate disease.

The disease state of rising PSA refers to men who have no detectable metastases on scans and in whom the PSA levels increase after local therapy, which may include radical prostatectomy or radiation therapy or both. In most cases, a rising PSA represents micrometastatic disease that is not detectable on conventional imaging studies. In this particular setting, data suggests that intermittent androgen suppression is a reasonable alternative to continuous antigen suppression without adversely affecting survival.

Patients with systemic disease, if they are noncastrate, have several options for treatment available, including Sipuleucel-T, abiraterone, enzalutamide and radium 223 dichloride, and now patients have these options available prior to getting chemotherapy. These options should be discussed with the patient prior to starting treatment. If patients do become castrate resistant, they still have options for treatment post chemotherapy that include cabazitaxel and secondary hormone therapies, including abiraterone and enzalutamide. Patients with symptomatic bone metastases can also be considered for radium 223 dichloride treatments.

An important aspect of patient care is palliative treatment for pain from bone metastases, which can be achieved with external beam radiation therapy with various techniques. Systemic treatments can also provide palliation. Chemotherapy treatment with mitoxantrone and prednisone and two bone-seeking radiopharmaceutical agents, strontium-89 and samarium-153, have been shown to reduce the pain of skeletal metastases despite the lack of survival benefit.

Early detection and treatment will lead to a significant number of men who could be cured of prostate cancer by radiation or surgery. These patients may have a variety of adverse effects because of the treatment, including urinary incontinence, erectile dysfunction and psychosocial issues. Prostate cancer is a disease of predominately older men with coexisting medical issues, and hormone therapy is associated with numerous adverse effects that are more pronounced in older men. Patients who receive long-term hormone therapy may develop insulin resistance, hyperglycemia and metabolic syndrome, which may increase cardiovascular mortality. However, systemic approaches in the treatment of prostate cancer continue to improve, and in this particular setting, prostate cancer is changing into a chronic disease.

Screening for **prostate cancer**

Michael Simonson, MD, CLP
Surgeon
American College of Surgeons, Commission on Cancer
Cancer Liaison Physician

Prostate cancer has long been an issue of substantial concern when evaluating the health and wellness of our male patients. There has been significant controversy regarding screening, evaluation and treatment for this disease over the years. There has been additional controversy recently due to reports of increasing frequency of prostate cancer over the past decade as well as reports of recent prostate cancer cases being more aggressive in nature.

These findings are established when evaluating the data provided to the American College of Surgeons Commission on Cancer database. This powerful tool allows hospitals and medical institutions across the country to pool data regarding cancer statistics. This can ultimately help guide our screening and treatment recommendations. Great Plains Health proudly takes part in the American College of Surgeons Commission on Cancer National Cancer Database to help provide the most effective methods of cancer treatment for patients in our community and across the country.

Prostate cancer **treatment options**

Millie Pevzner, MD
Great Plains Urology

Prostate cancer is among the most common malignancies diagnosed in men. Unfortunately, there is no consensus among professional organizations regarding whether or not to perform prostate cancer screening. The American Urological Association recommends shared decision making regarding the need for screening in men with a family history of prostate cancer, African-American men, and males aged 55-69. There may be other indications for or against prostate cancer screening, and this should be discussed with your family doctor or urologist.

Once diagnosed, there are multiple treatment options available. The most common treatment options remain surgical removal of the prostate or radiation therapy, which could include implanting radioactive pellets into the prostate. Some other options include cryotherapy or freezing the prostate gland, hormonal therapy and other experimental options. Increasingly, some men with a low volume of non-aggressive disease are opting for close surveillance without active treatment. Each treatment option has different side effects and should be discussed in detail with your doctor.

2015 annual **clinical research report**

written by:

Lisa Kosmacek, RN
Clinical Research Coordinator
Shelia Markley, RN
Nurse Navigator

Great Plains Health Callahan Cancer Center's medical oncology department is dedicated to providing the most up-to-date clinical research for our patients. Our clinical research coordinator, along with our nurse navigator, is responsible for keeping physicians updated on potential trials, opening new trials, assessing patients for possible enrollment, working with the physicians to determine patient eligibility, registering patients for clinical trials, following these patients' progress and treatment on a scheduled basis and doing all required paperwork for each trial.

The research program at Great Plains Health is an affiliate of the University of Nebraska Medical Center and works with the Center to open new studies through Alliance for Clinical Trials in Oncology and keeps all regulatory files current for all studies. The studies available vary as to diagnosis, with breast, lung, colon and prostate being the most commonly available studies. There are also studies open for patients with diffuse large B-cell lymphoma and follicular lymphoma, to name a few. In 2015, we also became affiliated with the Missouri Valley Cancer Consortium, which provides a number of clinical trials for all cancers available to our patients to be enrolled in provided they meet the inclusion criteria.

The Lymphoma Study Group Registry and Tissue Bank through the University of Nebraska Medical Center is another group with which the research coordinator works to follow patients diagnosed with lymphoma, leukemia and other related disorders. In 2015, 12 new patients consented to be in the Lymphoma Study Group. There are currently 160 patients in follow-up for the Lymphoma Study Group.

Twenty-six patients were accrued to studies in 2015 at the Callahan Cancer Center. These studies consisted of breast cancer patients, lymphoma or leukemia patients, and lung cancer patients. We continue to follow patients who have been enrolled in past clinical trials until their time of death. We are proud of the contributions we are making to research at the Callahan Cancer Center and the accessibility of participation in leading-edge treatments for our patients.

2015 **cancer conferences**

written by:

Jill Reeves, MS, CTR
Cancer Registrar
Cancer Conference Coordinator

Great Plains Health held 24 multidisciplinary cancer conferences in 2015 with the goal of providing consultative services to formulate an effective treatment plan and offer education to physicians and allied health professionals. There were 165 physicians in attendance, representing many specialties, including cardiology, family and internal medicine, hematology, obstetrics/gynecology, palliative care, pathology, pulmonology, radiology, surgery, urology and radiation and medical oncology, along with a total of 266 other allied health care providers.

Cases were presented by medical oncologists Ahmed Awais, MD; Gauri Bhide, MD; Maria de Villa, MD; and Irfan Vaziri, MD, and by radiation oncologist Todd Hlavaty, MD. Pathologists assisting in case presentations were Yomi Asojo, MD; Byron Barksdale, MD; Lyle Barksdale, MD; Donald Varner, MD; and Delane Wycoff, MD. Radiologists who presented imaging for cases were Clark Diffendaffer, MD; David Hatch, MD; Rick Kukulka, MD; Doug Lake, MD; and Ladd Lake, MD.

The primary sites covered were abdominal cavity, adrenal gland, ampulla of vater, axilla, bone marrow, breast, chest wall, colon, endometrium, epiglottis, esophagus, eye, head and neck, iliac bone, kidney, leptomeninges, liver, lung, lymph nodes, mandible, mediastinum, mouth, orbit, ovary, pancreas, parotid gland, prostate, rectal, rectum, scalp, skin, stomach, testis, thyroid, tongue and uterus. There were a total of 100 patient cases presented for discussion and recommendations on cancer staging, treatments, national guidelines, clinical trials, trends and recurrences.

During 2015, the cancer registry collected information on 473 cases, with 395 of those being analytic or cases that were initially diagnosed and/or treated at Great Plains Health.

2015 **cancer registry summary**

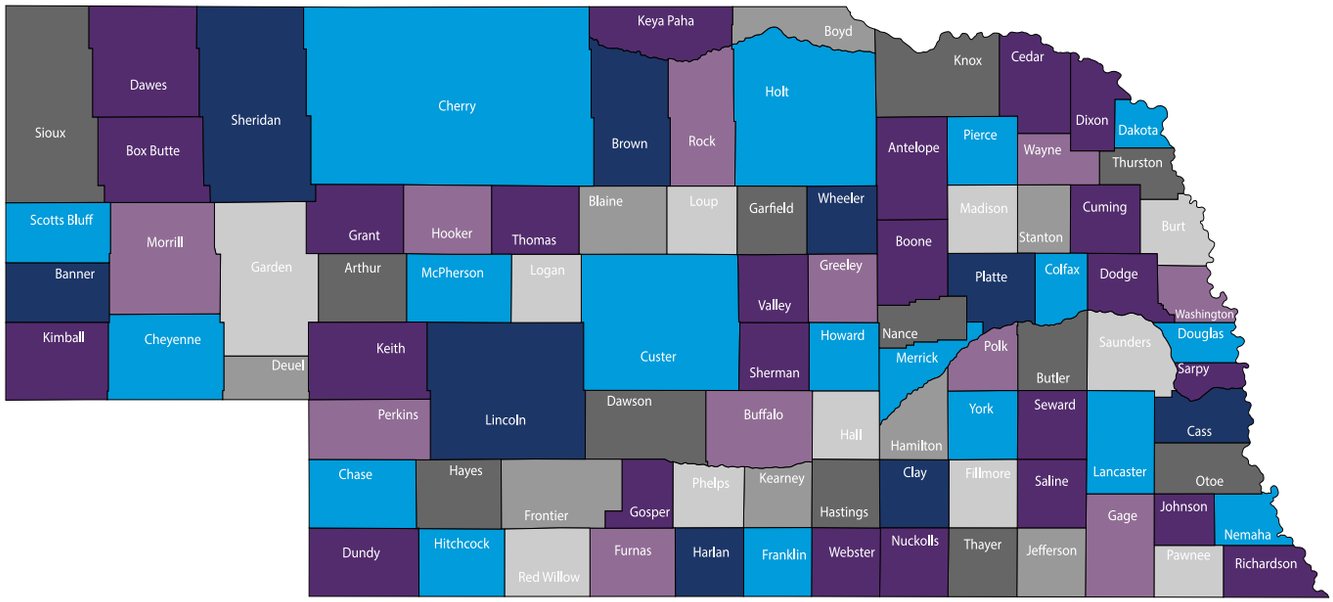
In 2015, Callahan Cancer Center patients came to Great Plains Health from west-central Nebraska, Kansas, Colorado and South Dakota. During 2015, the cancer registry collected information on 473 cases, with 395 of those being analytic or cases that were initially diagnosed and/or treated at Great Plains Health.

The registry documents patient information such as demographics, site and type of cancer, surgery and other types of treatment. The registry submits this information to the Nebraska State Cancer Registry monthly and annually to the National Cancer Database. The registry maintained a follow-up rate on all analytic cases from our reference date of 90 percent and a 93 percent follow-up rate for all cases diagnosed in the past five years. The status of these patients is followed annually for medical surveillance and complete data information. Cancer registry data is utilized to inform program quality improvements in patient care.

The registry coordinates the multidisciplinary cancer committee, which meets quarterly and is responsible for goal setting, planning, initiating, implementing, evaluating and improving all cancer-related activities in the program. The registry also facilitates the publication of the annual report on cancer and assists with the bimonthly multidisciplinary cancer conferences.

Each year, the certified cancer registrars earn continuing education units. In October, the cancer registrar attended the annual educational meeting in Omaha conducted by TRAN, the Tumor Registrars Association of Nebraska.

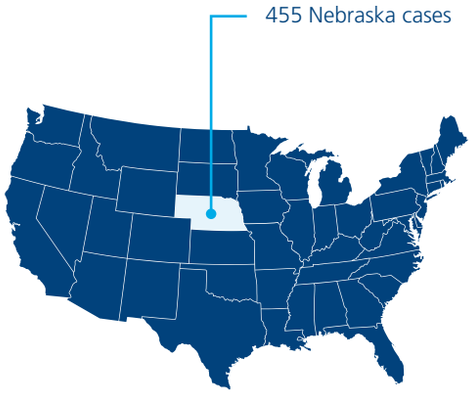
2015 **cancer cases** by county



Location	Cases
Blaine	1
Box Butte	1
Brown	2
Buffalo	1
Chase	21
Cherry	18
Custer	7
Dawes	1
Dawson	30
Deuel	4
Dundy	7
Frontier	8
Furnas	2
Garden	4
Garfield	1
Gosper	3
Grant	2

Location	Cases
Hayes	3
Hitchcock	13
Holt	1
Hooker	5
Jefferson	1
Keith	48
Keya Paha	2
Lancaster	1
Lincoln	205
Logan	6
Loup	1
McPherson	3
Perkins	11
Red Willow	30
Sarpy	1
Thomas	8
Todd	2
Valley	1

Out of NE:	
KS	11
CO	5
SD	2



18 out-of-state cases

Statistical and comparison **data**

2015 top incidence sites at Great Plains Health by gender

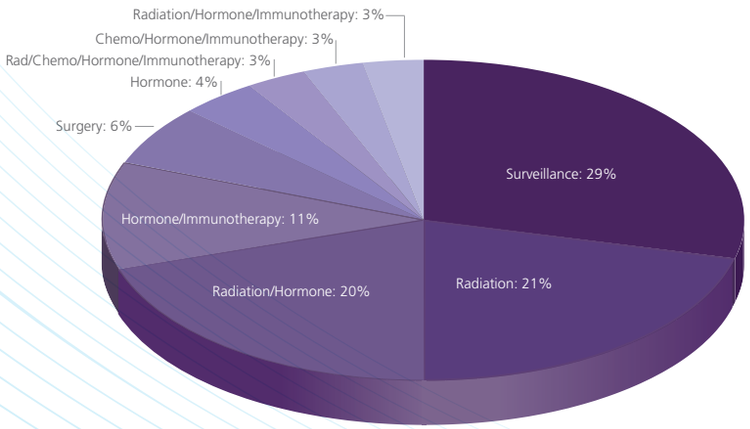
Women	Great Plains Health
Breast	31.0%
Lung	11.0%
Colorectal	9.0%
Lymphoma	6.0%
Uterus	5.0%
Other	38%
Total Cases	**244**

Men	Great Plains Health
Prostate	16.0%
Lung	16.0%
Colorectal	12.0%
Bladder	9.0%
Leukemia	7.0%
Other	40.0%
Total Cases	**229**

Great Plains Health first-course treatment for prostate cancer 2014

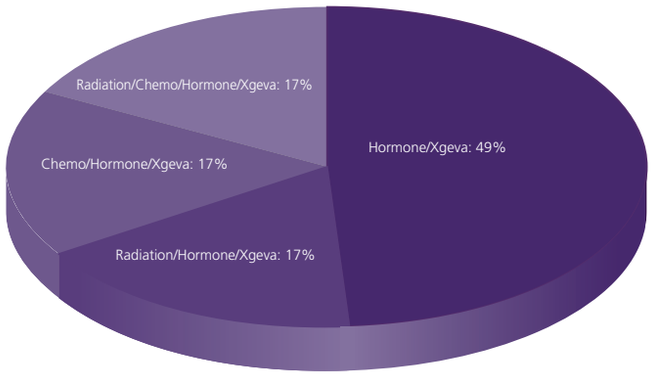
Treatment options for prostate cancer include observation (active surveillance), surgery, hormone therapy, radiation, chemotherapy and immunotherapy.

Great Plains Health most frequently recommended surveillance for the low-risk, low-stage prostate cancers. Radiation, surgery or hormone therapy alone were given to 31% of patients. The remaining 40% received a combination of treatments.



Great Plains Health prostate with bone metastases treatment, Stage IV, 2014

Per NCCN guidelines, treatment for patients diagnosed with or initially treated for Stage IV prostate cancer with bone metastases needs to consider bone antiresorptive therapy with denosumab or zoledronic acid if bone metastases are present. One hundred percent of Great Plains prostate cancer cases that were diagnosed and/or initially treated for Stage IV prostate cancer with bone metastases were treated with denosumab in combination with other therapies.



Top five sites and total incidence 2015

Great Plains Health	Cases
Breast	16%
Lung	13%
Prostate	11%
Colorectal	8%
Non-Hodgkins Lymphoma	7%
Other	45%
Total all cancer cases	**473**

Nebraska*	Cases
Breast	15%
Prostate	13%
Lung	10%
Colorectal	9%
Melanoma	5%
Other	48%
Total all cancer cases	**9,740**

United States*	Cases
Breast	15%
Lung	13%
Prostate	11%
Colorectal	8%
Bladder	5%
Other	48%
Total all cancer cases	**1,685,210**

*Estimated, 2016 Cancer Facts & Figures, ACS

Stage at diagnosis – prostate cancer 2003-2013

	GPH	NCDB
Stage 0	0%	0%
Stage I	4%	8%
Stage II	77%	71%
Stage III	7%	9%
Stage IV	11%	6%
Unknown	1%	6%

Earlier stage at diagnosis strongly affects patient prognosis.

Stage at diagnosis – prostate cancer 2014

	GPH
Stage I	20%
Stage II	59%
Stage III	0%
Stage IV	21%

Comparison: Age at diagnosis – prostate cancer 2003 to 2013

	Under 20	20 – 39	30 – 39	40 – 49	50 – 59	60 – 69	80 – 79	80 – 89	90+
Great Plains Health	0%	0%	0%	2%	12%	30%	40%	14%	1%
National Cancer Database	0%	0%	0%	3%	24%	41%	25%	6%	1%

Great Plains Health 2015 diagnosis
by class of case*, gender and stage**

DIAGNOSTIC SITE	CLASS OF CASE		GENDER		STAGE (ANALYTIC CASES)							TOTAL	TOTAL%
	Analytic	NonA	M	F	0	I	II	III	IV	NA	UNK		
ORAL CAVITY AND PHARYNX	11	2	6	7	0	0	1	2	7	0	1	13	2.75
Lip	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Tongue	5	1	2	4	0	0	0	0	4	0	1	6	1.27
Salivary Gland	1	0	1	0	0	0	1	0	0	0	0	1	0.21
Floor of Mouth	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Gum and Other Mouth	1	0	0	1	0	0	0	0	1	0	0	1	0.21
Tonsil	0	1	0	1	0	0	0	0	0	0	0	1	0.21
Nasopharynx	2	0	2	0	0	0	0	1	1	0	0	2	0.42
Oropharynx	1	0	0	1	0	0	0	1	0	0	0	1	0.21
Hypopharynx	1	0	1	0	0	0	0	0	1	0	0	1	0.21
Other Oral Cavity and Pharynx	0	0	0	0	0	0	0	0	0	0	0	0	0.00
DIGESTIVE SYSTEM	61	13	43	31	4	6	12	9	26	0	4	74	15.64
Esophagus	6	0	4	2	0	0	1	1	4	0	0	6	1.27
Stomach	2	1	2	1	0	0	0	0	2	0	0	3	0.63
Small Intestine	0	1	0	1	0	0	0	0	0	0	0	1	0.21
Colon and Rectum	40	10	27	23	4	5	7	5	15	0	4	50	10.57
Colon excluding Rectum	28	7	18	17	2	4	4	3	13	0	2	35	7.40
Cecum	8	0	4	4	0	2	1	1	3	0	1	8	1.69
Appendix	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Ascending Colon	5	1	2	4	2	1	1	1	0	0	0	6	1.27
Hepatic Flexure	2	0	2	0	0	1	0	1	0	0	0	2	0.42
Transverse Colon	5	1	2	4	0	0	1	0	4	0	0	6	1.27
Splenic Flexure	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Descending Colon	1	0	1	0	0	0	0	0	1	0	0	1	0.21
Sigmoid Colon	5	2	5	2	0	0	0	0	4	0	1	7	1.48
Large Intestine, NOS	2	3	2	3	0	0	1	0	1	0	0	5	1.06
Rectum and Rectosigmoid Junction	12	3	9	6	2	1	3	2	2	0	2	15	3.17
Rectosigmoid Junction	4	1	4	1	0	1	1	1	1	0	0	5	1.06
Rectum	8	2	5	5	2	0	2	1	1	0	2	10	2.11
Anus, Anal Canal and Anorectum	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Liver and Intrahepatic Bile Duct	2	1	3	0	0	0	0	0	2	0	0	3	0.63

DIAGNOSTIC SITE	CLASS OF CASE		GENDER		STAGE (ANALYTIC CASES)							TOTAL	TOTAL%
	Analytic	NonA	M	F	0	I	II	III	IV	NA	UNK		
Liver	1	1	2	0	0	0	0	0	1	0	0	2	0.42
Gallbladder	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Intrahepatic Bile Duct	1	0	1	0	0	0	0	0	1	0	0	1	0.21
Other Biliary	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Pancreas	11	0	7	4	0	1	4	3	3	0	0	11	2.33
Retroperitoneum	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Peritoneum, Omentum and Mesentery	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Other Digestive Organs	0	0	0	0	0	0	0	0	0	0	0	0	0.00
RESPIRATORY SYSTEM	61	3	37	27	1	10	6	5	37	0	2	64	13.53
Nose, Nasal Cavity and Middle Ear	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Larynx	2	0	1	1	1	0	1	0	0	0	0	2	0.42
Lung and Bronchus	58	3	35	26	0	10	5	5	36	0	2	61	12.90
Non-small Cell	39	2	24	17	0	9	4	5	20	0	1	41	8.67
Small Cell	13	0	7	6	0	0	0	0	12	0	1	13	2.75
Other Lung	6	1	4	3	0	1	1	0	4	0	0	7	1.48
Pleura	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Trachea, Mediastinum, Other Resp.	1	0	1	0	0	0	0	0	1	0	0	1	0.21
BONES AND JOINTS	0	0	0	0	0	0	0	0	0	0	0	0	0.00
SOFT TISSUE INCLUDING HEART	0	0	0	0	0	0	0	0	0	0	0	0	0.00
SKIN	14	8	12	10	1	6	2	1	3	1	0	22	4.65
Melanoma of the Skin	13	7	11	9	1	6	2	1	3	0	0	20	4.23
Other Nonepithelial Skin	1	1	1	1	0	0	0	0	0	1	0	2	0.42
Epithelial Skin	0	0	0	0	0	0	0	0	0	0	0	0	0.00
BREAST	64	13	1	76	11	35	5	6	4	0	3	77	16.28
Female Breast	63	13	0	76	11	34	5	6	4	0	3	76	16.07
Male Breast	1	0	1	0	0	1	0	0	0	0	0	1	0.21
FEMALE GENITAL SYSTEM	16	7	0	23	0	5	1	5	3	0	2	23	4.86
Cervix Uteri	0	1	0	1	0	0	0	0	0	0	0	1	0.21
Corpus and Uterus, NOS	9	4	0	13	0	3	0	3	1	0	2	13	2.75
Corpus Uteri	9	4	0	13	0	3	0	3	1	0	2	13	2.75
Uterus, NOS	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Ovary	6	2	0	8	0	2	1	1	2	0	0	8	1.69
Vagina	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Vulva	1	0	0	1	0	0	0	1	0	0	0	1	0.21
Other Female Genital Organs	0	0	0	0	0	0	0	0	0	0	0	0	0.00

Great Plains Health 2015 diagnosis
by class of case*, gender and stage**

(continued from page 15)

DIAGNOSTIC SITE	CLASS OF CASE		GENDER		STAGE (ANALYTIC CASES)							TOTAL	TOTAL%
	Analytic	NonA	M	F	0	I	II	III	IV	NA	UNK		
MALE GENITAL SYSTEM	32	7	39	0	0	10	16	1	5	0	0	39	8.25
Prostate	31	7	38	0	0	9	16	1	5	0	0	38	8.03
Testis	1	0	1	0	0	1	0	0	0	0	0	1	0.21
Penis	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Other Male Genital Organs	0	0	0	0	0	0	0	0	0	0	0	0	0.00
URINARY SYSTEM	46	5	32	19	22	8	4	3	7	0	2	51	10.78
Urinary Bladder	29	1	21	9	19	5	2	0	3	0	0	30	6.34
Kidney	11	3	7	7	0	3	2	2	2	0	2	14	2.96
Renal Pelvis	3	0	2	1	1	0	0	0	2	0	0	3	0.63
Ureter	3	1	2	2	2	0	0	1	0	0	0	4	0.85
Other Urinary Organs	0	0	0	0	0	0	0	0	0	0	0	0	0.00
EYE AND ORBIT	1	0	0	1	0	0	0	0	0	1	0	1	0.21
Eye, Orbit: Nonmelanoma	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Eye, Orbit: Melanoma	1	0	0	1	0	0	0	0	0	1	0	1	0.21
BRAIN/OTHER NERVOUS SYSTEM	17	3	10	10	0	0	0	0	0	17	0	20	4.23
Brain, Malignant	6	2	5	3	0	0	0	0	0	6	0	8	1.69
Cranial Nerves, Other Nervous System	0	1	0	1	0	0	0	0	0	0	0	1	0.21
Brain-CNS: Benign, Borderline	11	0	5	6	0	0	0	0	0	11	0	11	2.33
ENDOCRINE SYSTEM	7	1	3	5	0	3	0	2	0	1	1	8	1.69
Thyroid	6	1	2	5	0	3	0	2	0	0	1	7	1.48
Thymus	1	0	1	0	0	0	0	0	0	1	0	1	0.21
Adrenal Gland	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Other Endocrine	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Endocrine: Benign, Borderline	0	0	0	0	0	0	0	0	0	0	0	0	0.00
LYMPHOMA	26	9	20	15	0	7	5	5	4	1	4	35	7.40
Hodgkin's Lymphoma	1	3	3	1	0	0	1	0	0	0	0	4	0.85
Hodgkin's – Nodal	1	3	3	1	0	0	1	0	0	0	0	4	0.85
Hodgkin's – Extranodal	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Non-Hodgkin Lymphoma	25	6	17	14	0	7	4	5	4	1	4	31	6.55
NHL – Nodal	16	3	12	7	0	2	2	5	3	0	4	19	4.02
NHL – Extranodal	9	3	5	7	0	5	2	0	1	1	0	12	2.54

DIAGNOSTIC SITE	CLASS OF CASE		GENDER		STAGE (ANALYTIC CASES)							TOTAL	TOTAL%
	Analytic	NonA	M	F	0	I	II	III	IV	NA	UNK		
MYELOMA	10	0	6	4	0	0	0	0	0	10	0	10	2.11
LEUKEMIA	14	4	11	7	0	0	0	0	0	14	0	18	3.81
Lymphocytic Leukemia	9	3	8	4	0	0	0	0	0	9	0	12	2.54
Acute Lymphocytic Leukemia	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Chronic Lymphocytic Leukemia	9	3	8	4	0	0	0	0	0	9	0	12	2.54
Other Lymphocytic Leukemia	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Non-Lymphocytic Leukemia	5	1	3	3	0	0	0	0	0	5	0	6	1.27
Acute Myeloid Leukemia	4	0	2	2	0	0	0	0	0	4	0	4	0.85
Acute Monocytic Leukemia	0	0	0	0t	0	0	0	0	0	0	0	0	0.00
Chronic Myeloid Leukemia	1	1	1	1	0	0	0	0	0	1	0	2	0.42
Other Myeloid/Monocytic Leukemia	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Other Leukemia	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Other Acute Leukemia	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Aleukemic, Subleukemic and NOS	0	0	0	0	0	0	0	0	0	0	0	0	0.00
MESOTHELIOMA	0	1	1	0	0	0	0	0	0	0	0	1	0.21
KAPOSI'S SARCOMA	0	0	0	0	0	0	0	0	0	0	0	0	0.00
MISCELLANEOUS	15	2	8	9	0	0	0	0	0	15	0	17	3.59
BENIGN/BORDERLINE (EXC. BRAIN)	0	0	0	0	0	0	0	0	0	0	0	0	0.00
TOTALS	**395**	**78**	**229**	**244**	**39**	**90**	**52**	**39**	**96**	**60**	**19**	**473**	**100.00**

*Analytic class of case is diagnosed and/or received initial treatment at Great Plains Health. Nonanalytic are all other cases seen or treated at Great Plains Health. **Stage groupings are from AJCC (American Joint Commission on Cancer) and gather cases into categories to facilitate analysis with lesser disease diagnosed at Stage I and greater disease at Stage IV.

Community outreach in 2016

Pam Garrick, BS
Community Outreach Coordinator

Great Plains Health continues its extensive community outreach efforts to educate the community about cancer, working in conjunction with community partners such as the American Cancer Society, North Platte Recreation Complex and The Visiting Nurse Association, funded by Susan G. Komen of Nebraska. Our team develops cancer awareness programs that teach preventive measures and lifestyle changes—such as smoking cessation, dietary modifications and exercise—that aid in reducing incidents of cancer. Outreach is conducted in a variety of ways, including lectures, broadcast media, web-based media, health fairs, brochures and other written media.

The team stresses the importance of having regular cancer screenings to detect cancer in its earliest stages, when it's likely to be curable. Great Plains Health is continuing to reach out to former and current tobacco users with our Lung Cancer Screening program. The cancer program also collaborated with our dermatologists, Daniel Mosel, MD, of Greater Nebraska Dermatology Clinic, PC, and James Bunker, MD, of Platte Valley Skin Clinic, to hold a special skin cancer screening on May 2, 2016, "Melanoma Monday," that served 76 patients.

In addition to holding or facilitating many other cancer awareness and prevention programs and screening events, Great Plains Health sponsors or facilitates access to support groups for cancer patients and their families. We continually assess the needs of our community and design programs and strategies to address those needs.

Prevention, education and screening programs:

- *Quit smoking now program*
- *Kicking butts day*
- *Biggest loser/weight loss program*
- *Lymphedema education and prevention*
- *Lung cancer screening*
- *Skin cancer screening*
- *Patient navigator*
- *Survivorship care plans*
- *Palliative care services*
- *2016 cancer symposium*

Support groups/services and events:

- *Pink out breast cancer awareness*
- *NEBRASKAland Days, tough enough to wear pink rodeo*
- *A gift of hope*
- *National cancer survivors day*
- *Grief counseling*
- *Footsteps grief camp*
- *I Can Cope*
- *Fun with color workshop*
- *A time to heal support group*
- *Look good, feel better*
- *Pastoral care*
- *Reach to recovery*
- *Relay for life*
- *Community wellness events*

Great Plains Health *at a glance*

89.7 million

ANNUAL ECONOMIC IMPACT OF GREAT PLAINS HEALTH TO THE REGION. *(*source info. noted)*

5,745
ADMISSIONS IN 2015

116
BEDS

FIRST HOSPITAL IN NEBRASKA
to implement GetWell technology in patient rooms.

GetWell is an interactive patient tool that runs through a keypad and patient room TV. The technology provides patients an easy-to-use medium to access patient education, ask providers questions, order meals and select from more than 4,000 movies and games. Patients can also receive immediate updates about their care plan, daily schedule and goals and detailed information about their healthcare team.

31,540 HOURS GIVEN BACK IN 2015 BY GPHEALTH EMPLOYEES VOLUNTEERING TO SERVE THE COMMUNITY.

1,063
employed at Great Plains Health

90
physicians on medical staff

203
volunteers serving throughout the health system

27,000
volunteer hours provided in 2016

30 GP Physician Network clinics and outreach clinics in North Platte and throughout the region.

511 BIRTHS IN 2015

30 MEDICAL & SURGICAL SPECIALTIES AVAILABLE

GREAT PLAINS HEALTH SERVES:

16,000 *square miles*

120,000 *people*

Great Plains Health has received a Leapfrog "A-rating" for safety

4 times

Investing in our local community

$120,332 given
in donations to local nonprofit groups who align with our goal to improve the health and wellness of the communities we serve.

AVERAGE MONTHLY UTILITY BILLS

ELECTRICITY: $74,000 | **GAS**: $26,800
WATER: $3,100 | **FUEL**: $4,600
PHONE/INTERNET: $27,500
REFUSE/SEWER: $21,800

CREATING LOCAL JOBS

295 new jobs since 2003

*Estimates computed by Kenneth Lemke, Ph.D., Nebraska Public Power District.

Great Plains Health
Callahan Cancer Center
Hematology & Oncology Services

Callahan Cancer Center

The Callahan Cancer Center is a modern, one-stop cancer center designed with patient care and convenience in mind. With 15 cancer treatment rooms, an on-site pharmacist and comprehensive cancer services all in the same location, our goal is to make cancer treatment seamless for the patients we serve in North Platte and the surrounding communities.

We're proud to be accredited by the American College of Surgeons Commission on Cancer as a community cancer center. This designation places us among the top one-fifth of the country's hospitals with approved cancer programs.

Here are some other reasons you should trust us to care for you or your loved one if cancer strikes.

A complete suite of cancer treatments

In our North Platte cancer center, we offer comprehensive services for people with cancer, including:

- Comprehensive cancer screenings and community-based cancer prevention programs, so we can catch cancer early or prevent it from even starting.
- Innovative cancer therapies to help you overcome your cancer. Our relationship with and participation in the National Cancer Registry and Community Cancer Program means that our patients have access to promising new treatments, clinical trials and national research protocols.
- Cancer support services that can help to ease your cancer recovery process, including case management, support groups and palliative care.

Our cancer center can also connect patients with:

- Home care and hospice services.
- A cancer library.
- Nutrition counseling.
- Rehabilitation specifically designed for people with cancer.

Cancer care close to home

We believe in convenient cancer treatments. That's why we have expanded our medical and/or radiation oncology programs in the following communities:

- Benkelman: medical oncology
- Grant: medical oncology
- McCook: medical oncology
- Valentine: medical oncology
- Broken Bow: medical oncology
- Imperial: medical oncology
- Ogallala: medical oncology
- Gothenburg: medical oncology
- Lexington: medical oncology
- Ord: medical oncology

It's one more way our oncology team is working hard to make sure the treatments you need are delivered where you need them.

Contact the Callahan Cancer Center

601 W. Leota
North Platte, NE 69101
308.568.7386

Callahan Cancer Center
oncologist and hematologists

Todd Hlavaty, MD

Specialty | Radiation oncology
Certification | American Board of Radiology, radiation oncology
Medical school | 1991 University of Arkansas School of Medicine, Little Rock, AR
Internship | Iowa Methodist Medical Center, Des Moines, IA
Residency | University of Iowa Hospitals and Clinics, Iowa City, IA

Jeremy Larsen, MD

Specialty | Medical oncology – hematology
Certification | American Board of Internal Medicine
Medical school | 2009 Creighton University School of Medicine, Omaha, NE
Residency | Internal medicine, Mayo School of Graduate Medical Education, Rochester, MN
Fellowship | Hematology/oncology, Mayo School of Graduate Medical Education, Rochester, MN

Avinash Pasam, MD

Specialty | Medical oncology – hematology
Certification | American Board of Internal Medicine
Medical school | Louisiana State University, Baton Rouge, LA
Residency | Internal medicine, Louisiana State University, Baton Rouge, LA
Fellowship | Hematology/oncology, Louisiana State University, Baton Rouge, LA

Irfan Vaziri, MD

Specialty | Medical oncology – hematology
Certification | American Board of Internal Medicine
Medical school | 1990 Aga Khan University School of Medicine, Karachi, Pakistan
Internship | Aga Khan University School of Medicine, Karachi, Pakistan
Residency | Internal medicine, University of North Dakota, Grand Forks, ND
Fellowships | Hematology/medical oncology, University of Nebraska Medical Center, Omaha, NE
Infectious disease, University of Texas Health Science Center, Houston, TX

Our mission:
To inspire health and healing by putting patients first – always.

Accreditation and **awards**

- Joint Commission Accreditation
- Stroke Gold Plus Quality Achievement Award – 2014
- Joint Commission Top Performer on Key Quality Measures in Heart Attack, Pneumonia and Surgical Care – 2013
- Level 2 Bariatric Surgery Center Accreditation, American College of Surgeons – 2013
- American College of Surgeons Commission on Cancer Outstanding Achievement Award – 2012
- LeapFrog Group patient safety A rating, four rating periods in a row; only hospital in Nebraska to receive this distinction for 2012 and 2013
- Nebraska Hospital Association Quest for Excellence Award for Reduction of Medication Errors – 2012
- Nebraska Hospital Association Quest for Excellence Award for Sepsis – 2011
- Silver Award from Joint Commission Resources for the 2012 Flu Vaccination Challenge
- Nebraska Hospital Association Quest for Excellence for Reduction in Patient Falls – 2015

Specialties:

- Anesthesiology
- Bariatric surgery
- Cardiology (interventional)
- Cardiology (invasive)
- Dermatology
- Emergency medicine
- Endocrinology
- Family medicine
- General surgery
- Hospitalist
- Infectious disease
- Internal medicine
- Medical oncology – hematology
- Neurology
- Obstetrics and gynecology
- Ophthalmology
- Oral surgery
- Orthopaedic surgery
- Otolaryngology
- Pain medicine
- Pathology
- Pediatrics
- Podiatry
- Psychiatry
- Pulmonology
- Radiation oncology
- Radiation
- Rheumatology
- Spine surgery
- Urology

Recent **improvement projects**

Recently completed construction

- Installation of a tomosynthesis unit, the latest state-of-the-art mammography technology using 3-D imaging for detection and diagnosis of breast cancer, with the help of the Great Plains Health Care Foundation, 2016
- An expanded wound care center designed to add a hyperbaric service, 2016
- A remodel of the cancer center, which includes updated waiting areas and patient rooms and televisions installed in the clinic visit rooms, 2016
- A remodel of the original hospital space (GPEast) to include office space and service line expansions, 2016
- $100 million patient tower featuring 116 private and acuity-adaptable patient rooms, expanded waiting areas, spacious cafeteria, registration, main entrance, education center and more, 2015
- A $14.5 million multispecialty medical office building (North Platte Health Pavilion) built in partnership with Midlands Medical Group, Pathology Services Inc., that will house 14 medical clinics, a pharmacy, an on-site lab and x-ray, 2015

Improvement projects and programs

- Two new permanent hematologists/medical oncologists
- $4 million new TrueBeam IMRT for radiation oncology
- Expanded nurse navigators to include more patients
- Survivorship Care Plans (SCP) for patients completing treatment
- On-site genetics counseling for recommended patients
- Inpatient palliative care team
- More oncology certified nurses and clinical trials
- Improved chemotherapy and disease-specific education

Great Plains Health
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Hematology & Oncology Services

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308.568.7386 | gphealth.org/callahancancer